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THE TRANSITION TO EUROPEAN
MONETARY UNION

ALBERTO GIOVANNINI



INTERNATIONAL FINANCE SECTION

DEPARTMENT OF ECONOMICS
PRINCETON UNIVERSITY
PRINCETON, NEW JERSEY

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THE TRANSITION TO EUROPEAN MONETARY UNION

1 Introduction

The Delors Report, prepared in 1989 by the Committee for the Study of Economic and Monetary Union, provides a broad framework for the transition toward monetary union in Europe. It does not, however, specify in detail how to manage it:

At this juncture, the Committee does not consider it possible to propose a detailed blueprint for accomplishing this transition, as this would depend on the effectiveness of the policy coordination achieved during the first stage, on the provisions of the Treaty, and on the decisions to be taken by the new institutions. Account would also have to be taken of the continued impact of financial innovation (par. 57).

It is necessary now to consider detailed plans. In December 1990, European governments will meet to shape the institutions and make appropriate changes in the Treaty of Rome to guide the transition and manage the monetary union. Discussion of proposals now will help to establish the structure and agreements necessary to effect timely progress toward integration and to forestall problems during the transition.

This essay describes a plan for monetary transition that both challenges and expands upon the conclusions of the Delors Report. It identifies the conditions that must be met to ensure stability of the European Monetary System (EMS) during transition and achieve agreement within the European Community (EC) regarding the role of the European System of Central Banks (ESCB) in harmonizing national and Community monetary and exchange-rate policies.

The main feature of the Delors Report is the concept of gradualism: integration is to be achieved over time in order to adapt the economies and policymaking processes to monetary union. The transition will be

An earlier draft of this paper was presented at the Institut d'Etudes Européennes, Brussels, March 21, 1990, and appeared as CEPR Occasional Paper No. 2 (April 1990).

accomplished in stages by removing barriers to the integration of goods and financial markets while simultaneously strengthening policy coordination and progressively building up the institutions that will manage the new European money.

This essay considers the questions raised by gradualism and the reasons why that strategy might lead to weak economic convergence that will make the transition more difficult to accomplish. It suggests several simple devices to strengthen the credibility of the gradual reforms and to forestall disruptions that could postpone monetary integration.

The essay accepts the fundamental premise of the Delors Report that monetary union is the final objective, for the reforms European governments will be considering would, and should, be quite different if that were not the final goal. To embark upon reforms without committing to ultimate integration would create a monetary system in Europe that would be truly “half baked” (to borrow the expression, but only the expression, from an outspoken observer), prone to financial instability and inflationary pressures.

Some possible explanations for the Committee’s choice of a step-by-step approach are analyzed in Section 2 of this essay. Section 3 discusses the risks of the transition. Section 4 presents a proposal to ease the transition and discusses in detail the institutions that could support it. The currency reform is outlined in Section 5. Section 6 relates the proposal presented here to the framework of the Delors Report. And Section 7 contains concluding observations.

2 Gradualism in the Delors Report

The choice of a gradual approach to monetary union in the Delors Report is not the result of an explicit analysis of alternatives. Indeed, the Report simply states that, following the 1988 deliberations of the European Council confirming the objective of economic and monetary union, the Committee has concentrated on “studying and proposing concrete stages leading towards the *progressive realization of economic and monetary union*” (par. 15).

One of the reasons for adopting a gradual approach appears to be the political difficulty of monetary integration. The Committee offers a sequence of three concrete and pragmatic stages leading toward monetary union but leaves the choice of pace to the national governments; it

states that “the question of when these stages should be implemented is a matter for political decision” (par. 15).

Another likely reason for the Committee’s choice is that monetary union is viewed as only one part of a much broader plan for an economic union that includes the single market, common competition and structural policies, and the coordination of macroeconomic policies. The Committee recognizes a double feedback between economic convergence and monetary convergence (see par. 42). Because economic convergence can be achieved only through a slow and lengthy series of reforms, monetary convergence should conceivably be designed to follow at the same pace. This argument is also supported by the view that monetary integration can be achieved only when the loss of the exchange-rate instrument has ceased to be serious, that is, when markets and policies are sufficiently integrated. It is likewise related to, but does not fully coincide with, the classic theory of optimum currency areas (see Kenen, 1969). Although the completion of the single European market will presumably create the conditions for Europe to become an optimum currency area, the convergence of national macroeconomic policies is not necessarily a desirable goal for such an area. The relevance of arguments relating to optimum currency areas for the transition to monetary union is discussed further in Section 4 below.

A final explanation for the Committee’s choice of a gradual transition might be the cost of adapting institutions. The management of a European currency, or even irrevocably locked exchange rates, will require a European monetary institution operating alongside other institutions. Its creation will require a change in the Treaty of Rome, and that change will have to be incorporated into national laws. This sequence will inevitably take time. In addition, because the political and administrative structure of the EC is quite different from that of a federal state, the new European central bank will operate in unprecedented political and economic circumstances. It can be argued, therefore, that the shaping of the new institutions should take time, to allow for some learning by doing and some flexibility in adapting to unforeseen problems.

In line with the gradualist approach, the Delors Report recommends that the duration of the two stages preceding the monetary union be left unspecified. The first stage, begun in July 1990, should accomplish the liberalization of financial markets, enlargement of membership in the exchange-rate mechanism (ERM) of the European Monetary System (EMS), and a change in the mandate of the Committee of Central Bank

Governors (CCBG). The second stage should establish the European System of Central Banks (ESCB), which would initially operate alongside the national monetary authorities. The third stage should accomplish the irrevocable fixing of exchange rates and complete the transfer of monetary authority to the ESCB.

The Report clearly reflects an awareness of the need for substantial monetary convergence following the removal of capital controls and the increased substitutability of national currencies (par. 22), but it does not seem to have weighed appropriately the threats to monetary stability that may arise from the liberalization and deregulation of financial markets. It does not even seem to regard exchange-rate stability as an overriding requirement for the transition to monetary union; even during the second stage, exchange-rate changes are not ruled out (par. 57). Finally, the Report does not ask what would happen if the plan for monetary union were seen to be less than fully credible, but the effects of that possibility are likely to be the main problem of the gradualist approach. These threats are discussed and evaluated in the next section.

3 The Dangers of the Transition

The main economic problems of the transition toward European Monetary Union (EMU) stem from the uncontrollable behavior of private-sector expectations in both the financial and the goods and labor markets. These problems are discussed below.

Money Demand

Since the summer of 1990, financial capital has moved free of control among all the members of the ERM except Spain. This new freedom will create an environment for monetary policy that is dramatically different from that of the past ten years.¹

A number of economists (including this one) believe that the EMS worked asymmetrically during its first decade, with one country at the center, the Federal Republic of Germany, serving as the “Nth country” and setting its monetary policy independently and the other members serving as the “N-1 countries” and progressively adjusting their monetary policies to accommodate those of the Bundesbank. Controls on

¹ For a discussion of the possible effects of the removal of capital controls, see Giavazzi and Spaventa (1990).

capital flows were also important for EMS operations during its first decade and served two main purposes:² (1) they allowed countries other than Germany to deviate, if only temporarily, from the monetary-policy stance followed by the Bundesbank, thus easing the convergence toward low inflation, and (2) they protected monetary policies from speculative pressures that were not dictated by fundamentals (i.e., self-fulfilling speculation).

The asymmetric structure of controls thus supported an asymmetry in monetary management. This structure has been altered, however, by the liberalization of French capital controls and the substantial loosening of Italian controls since 1985-86, and some believe that this liberalization also removed the asymmetry underlying the operations of the EMS. Whichever mode of operation, symmetric or asymmetric, will come to prevail following the full liberalization of capital movements in the summer of 1990, the conduct of monetary policy will become more difficult, not only for countries like France and Italy, but also for Germany, which will no longer be able to pursue its own objectives independently of external constraint.

In addition to the foreign-exchange pressures generated by temporary differences between national monetary policies, there is an intensified risk of “nonfundamental” speculation. It will be easier for speculators to provoke exchange-rate turbulence for their profit because it will be easier to take very large positions in European currencies. The relevance of destabilizing speculation is suggested by the behavior of the dollar exchange rate since the inception of generalized floating: to date, no sensible model of the foreign-exchange market based on fundamentals has been able to explain the extreme short-run volatility and unprecedented long-run swings of the dollar, a failure that suggests that much of the speculative activity in the foreign-exchange markets is not tightly linked to fundamentals.³

Further turbulence in the foreign-exchange market will come from the very substantial innovations in banking and financial markets soon to take place in Europe. The removal of barriers to competition in the banking industry (sanctioned by the Second Banking Directive) will create tremendous opportunities in the transactions-services business

² This theory is presented in Giavazzi and Giovannini (1989).

³ For a recent critical appraisal of the experience with floating exchange rates, see Rolnick and Weber (1989).

and in consumer banking. A first look at the data shows that the use of checks, credit cards, and automatic-teller machines is much more limited in Europe than in the United States. The potential for growth in these services is therefore significant. In addition, the currently wide divergence of reserve-to-deposit ratios suggests that the removal of competitive barriers will also put pressure on governments to lower them to a uniform standard, with very large effects on the stocks of national high-powered moneys. All of these developments will inevitably have destabilizing effects on the demand for money and will thus have repercussions in the exchange markets.

Finally, there are good reasons to expect switches in the demand for currencies. Firms and individuals are now able to hold checking accounts in any EC currency and are certainly free to choose any EMS currency to settle bilateral obligations.⁴ The substitutability among currencies will be drastically increased by the ability of firms and individuals in all the EMS countries to diversify and actively manage their currency portfolios across a wide range of national moneys.

In summary, developments in financial markets during the transition will bring about (1) fluctuations in the demand for money provoked by financial innovation and deregulation in the banking industry, with ensuing instability in money markets, and (2) higher substitutability of national moneys, which will make the demand for individual currencies very responsive to rational or irrational views about the success of the transition to European Monetary Union and views about prospective movements of exchange rates.

Expectations

A second set of problems relates more directly to the adjustment of expectations. The first ten years of the EMS witnessed a very substantial, but incomplete, convergence of inflation rates. The lira and the French franc were remarkably stable in 1988 and 1989 despite the persistence of inflation differentials. As a result, the real effective exchange rates for these two currencies appreciated by between 2 to 4 percent in 1989 alone. The real appreciation of the Spanish peseta was even more significant at 5 percent. These movements in real exchange rates are the sum of two phenomena: real shocks and expectations. The

⁴ Until very recently, residents of most EC countries were effectively limited to checking accounts denominated in their own currencies.

Latin countries have tended to grow faster than the Federal Republic of Germany, producing differences in productivity growth, real wage pressures coming from demand pressures, and so on. These real shocks have given rise to changes in relative prices, reflected in appreciations of the real exchange rate and in the dynamics of current-account balances within the European Community. They cannot be effectively counteracted by monetary policies.

Expectations have also contributed to inflation differentials. Price setters, producers and unions, embody in their pricing and bargaining policies expectations about exchange-rate changes. These expectations are influenced by the credibility of the bilateral parities in the ERM, and they represent the most difficult obstacle to convergence. If, for example, producers and unions expect a devaluation of the national currency, and they raise prices and wages in light of that expectation, the rate of inflation will rise. The central bank can either refuse to devalue and thus accept a real appreciation and a current-account deficit, or it can accommodate inflation by devaluing the currency and thus validate the expectations.

The pressure to devalue will come not only from domestic exporters, but also from ERM partners, who would otherwise suffer from imported inflation. An example of this is provided by the debates throughout 1989 between the Bundesbank, on the one hand, and the Banque de France and Banca d'Italia, on the other, concerning the desirability of a devaluation of the lira and the French franc. Because inflation differentials had not been eliminated in 1989, fixed parities meant that Germany was importing inflation from her neighbors. For this reason, the Bundesbank advocated a devaluation of the franc and the lira, giving as the official justification the need to balance current accounts. France and Italy resisted these pressures, however, stating that devaluation would not by itself reduce current-account imbalances, but would simply give an extra push to domestic inflation.

This sequence illustrates a general phenomenon: even a slight probability of a devaluation prompts wage and price setters to hedge and therefore increases the domestic inflation rate. The resulting appreciation of the real exchange rate induces tensions with the partners in the ERM, because it exports inflation to the country that has exercised monetary restraint the most. Yet, changes in exchange rates to accommodate inflation differentials and angry partners amount to a declaration that public expectations were right, and that fixed rates are not sustainable. These devaluations also make the inflation differentials

permanent, because they return relative prices to equilibrium. Thus, exchange-rate realignments defeat the purpose of the transition to monetary union. Only the fixing of bilateral parities can induce the convergence of expectations that is necessary to eliminate inflation differentials and—with the help of the full liberalization of capital movements—the convergence of national currencies. The achievement of these objectives will ease the final steps toward a single currency.

4 A Proposal for the Management of the Transition

The foregoing discussion leads to the first pillar of this proposal: no meaningful gradual transition to monetary union can allow exchange-rate parities to be changed during the process. As argued above, the fixity of central rates is necessary because any change in parities would accommodate permanent differences in inflation rates, recognize differences across European currencies, and indefinitely postpone monetary convergence. To convey a clear message of commitment to the public, irrevocably fixed parities could be accompanied by some narrowing of the bilateral bands that limit fluctuations around the fixed parities.

The most important economic effect of fixed parities is, of course, to relinquish completely the advantages of changing the exchange rate to offset relative price changes. Forsaking these advantages, which are most prominently discussed in the literature on optimum currency areas, is the most serious cost of the transition. There are reasons to believe, however, that the stability of exchange rates might by itself bring about the closer integration of goods and factors markets that provides the backbone of an optimum currency area. This argument is presented by Bertola (1989) and relies on the observation that the reactions of producers and consumers to price incentives can be significantly less elastic in the presence of exchange-rate uncertainty than in its absence. This important modification of the original theory of optimum currency areas might substantially diminish the cost of relinquishing exchange-rate changes from the beginning of the transition period. Eichengreen (1990), in a thorough and highly valuable analysis of the experience of the United States as a currency area, suggests that capital mobility is the most likely absorber of country-specific imbalances. He concludes, along the lines of Bertola, that the mobility of productive capital is likely to be enhanced by the disappearance of exchange-rate risk.

Because bilateral parities should not be changed during the transition, the gradualist approach cannot solve the fundamental problem of all fixed-rate regimes: disagreements among member countries about the appropriate stance of monetary policy cannot persist without bringing down the system. Even involuntary errors by central banks, such as errors in forecasting velocity, can seriously jeopardize exchange-rate parities by triggering large capital flows. Indeed, the tradeoff to be faced by European governments aiming at more stable exchange rates and more integrated financial markets is between credibility and flexibility. It is necessary to create a system in which exchange-rate parities are fully credible, but which allows enough flexibility for the monetary authorities both to adapt to changing conditions in national money markets, and, as the Delors Report suggests, to learn by doing.

To achieve this, I propose a modification in the mechanics of gradualism described in the Delors Report and suggest a structure for the European System of Central Banks (ESCB) that would allow flexible and credible management of the transition.

Gradualism Rescued

The Delors Report neither rules out exchange-rate changes nor specifies deadlines for the completion of stages one and two. These two omissions account for the weakness of the proposed transition plan. Recurrent instability in foreign-exchange markets and inflationary expectations could force governments into a series of exchange-rate realignments that would ultimately bring about a de facto dismemberment of the zone of monetary stability successfully created by the EMS. For this reason, realignments of central parities should be categorically ruled out during the transition.

An official pledge not to change bilateral parities, however, is not enough to ensure the credibility of the plan and smooth progress toward monetary union; ostensibly fixed exchange rates have been changed before in history. What is needed is a mechanism that automatically prevents destabilizing speculation from being successful and yet preserves the virtues of gradualism.

This mechanism would be a declaration by all governments embarking on stages one and two that disruptions in the foreign-exchange and money markets would be met, not by realignments, but by an acceleration instead of the final monetary reform and the creation of the single currency ahead of time. This option to accelerate the monetary union

would give full credibility to the fixed bilateral parities during the transition.

What would be the cost of exercising this option? As argued in Section 2, the advantages of gradualism appear to be associated with the political difficulties of a sudden monetary reform, the desire to achieve more integration of goods and financial markets (the optimum-currency-area argument) and the costs of adapting institutions.

If the acceleration of the monetary union were prompted by monetary disruptions during the transition, and if the alternative were the sure postponement of the union and the likely undoing of monetary integration (and consequent delay in the completion of the single market), the political obstacles to acceleration would probably be reduced to a minimum.

The sudden adoption of a single currency during the transition should not be of great concern from the standpoint of the optimum-currency-area argument. The opportunity cost of jumping from a system of irrevocably fixed rates to a single currency would be zero, because changes in bilateral parities would have been ruled out during the transition. Furthermore, central bankers in ERM countries are already using parity changes extremely sparingly, so that the loss of flexibility would be minimal.

The third argument for gradualism, the cost of adapting institutions, would still apply. It is plausible, however, that, given the substantial preparatory work governments are doing for the intergovernmental conference to be held in December 1990, they will have worked out most of the technical details for the creation of a European central bank; accelerating its creation should not require a large additional investment of technical resources.

Finally, it should be pointed out that the option of accelerating the monetary union has a very small probability of being exercised in a world of rational agents and well-working markets. The arguments presented above suggest that inflation differentials and exchange-rate realignments cannot disappear if governments have no credible means of convincing the public of the fixity of exchange rates. Rational price setters and foreign-exchange speculators would continue to expect realignments and would continue to behave in ways that brought them about, thereby validating their expectations. By contrast, rational agents would have no incentives to raise prices and stage runs on the central bank if they knew that the only effect of their activities would be to trigger immediately the “bear squeeze” of the currency reform.

Unfortunately, financial markets are not driven exclusively by rational behavior and do not always work flawlessly. It is therefore necessary to safeguard the option of acceleration by creating institutional arrangements that can absorb nonsystematic shocks and facilitate the coordination of national monetary authorities prior to the achievement of full monetary union. These institutional arrangements are described below.

How Should the European System of Central Banks Work?

To facilitate the transition to a common central bank, the ESCB could begin operations through two agencies: an Exchange-Rate Stabilization Authority (ERSA) and the Board of Central Bank Governors (BCBG). This would allow for a clear separation of its responsibilities for bilateral exchange-rate intervention and for regulation of the money supply, and would distinguish them in turn from those of the national central banks, which would continue to be responsible for the supplies of the national currencies. Only the bilateral European exchange rates and foreign-exchange operations affecting the dollar rate would be delegated to ERSA. ERSA's dollar position, however, would be strictly limited by the member countries' central banks through the BCBG, which would act as a consulting body to help central bank governors coordinate national monetary policies. This institutional structure would meet three criteria necessary for a relatively easy convergence of monetary policies leading to European monetary union:

1. Transparency. When operating on intra-European exchange rates, ERSA would by definition be unable to affect the value of the aggregate stock of money of the countries in the system. It could only change the composition so as to accommodate shifts in demand among national currencies and thus stabilize exchange rates. Its positions in European currencies would therefore be limited by the size of its total resources. Its dollar operations, however, could change the total stock of money in Europe, and its dollar positions would therefore be strictly limited by the BCBG.

Under the plan proposed here, money creation during the transition would be left to the national central banks. The BCBG, however, would provide the ideal setting for monitoring the policy stances of member countries and for facilitating the reconciliation of national policies with the overall objective of fixed exchange rates. The BCBG would work in conjunction with ERSA, as its operations would indicate which currencies were "scarce" and which were "abundant." This working relationship is explained in more detail below.

Because ERSA would act independently and the BCBG would periodically evaluate the policies of individual countries in the light of ERSA's operations, the proposed separation of money creation from exchange-market intervention would make it comparatively easy for the BCBG to identify instances in which national central banks were sterilizing the effects of ERSA operations on their money stocks and thus to identify inconsistencies between national policies and the viability of the fixed exchange rates. This increased transparency would significantly facilitate the process of coordinating monetary policies so as to sustain the fixed rates.

2. Credibility. As argued above, bilateral parities should remain fixed during the transition to a single currency. The structure proposed here is very likely to enhance the credibility of fixed exchange rates for three reasons. First, it would provide a strong signal to foreign-exchange markets that fixed rates had become the overriding objective in the transition; an independent agency would act on behalf of the member countries in the foreign-exchange markets. Second, it would facilitate the coordination of monetary policies by separating the function of money creation from the pegging of exchange rates (more on this below). Third, it acknowledges that financial markets are not always correct and that they can be the source of serious disruptions; the proposed institutions would strengthen the system of fixed rates by facilitating the absorption of fluctuations in currency demand that are not justified by changes in the economic fundamentals, rather than forcing countries to adjust to them immediately and passively.

3. Flexibility. The proposed system would be flexible both because it would permit learning by doing, without unduly exposing the fixed parities to speculative pressures, and because it could easily adapt to the changes required for the subsequent transition to a single currency and a common central bank.

Day-to-day operations under the new system would be facilitated by the ability of ERSA to absorb currency-specific shocks without compelling countries to adjust to them immediately. This flexibility would be essential in the initial phases of union, when the central banks of the individual countries would be learning how to operate the new system and possibly making errors that should not be permitted to jeopardize the system itself.

ERSA and the BCBG are well suited to become the two arms of the permanent European central bank in the final phase of monetary union. The BCBG could easily evolve from a purely monitoring and consulting

organization into a decisionmaking body; it would be composed of the governors of the member countries' central banks, and it would have the institutional experience accumulated as a regulatory and advisory body. ERSA could become the principal foreign-exchange (dollar) intervention agency for the new system and even the principal agent for open-market operations, playing a role similar to that of the Federal Reserve Bank of New York in the Federal Reserve System.

The proposed system can be viewed simply as a strengthening of the current EMS institutions, and, seen in that light, it should be easy for member countries to accept. ERSA would be a stronger version of existing financing facilities and not very different from the original concept of the European Monetary Cooperation Fund (EMCF). The crucial change required would be to grant it independent status. Similarly, the BCBG resembles the Committee of Central Bank Governors, especially since the recent reform of November 1989. Under the proposed system, however, the BCBG would have a very precise role, defined by the nature and operations of its companion institution, ERSA.

More on the Exchange-Rate Stabilization Authority

ERSA would be physically and operationally distinct from the national central banks, which would give it the resources required to intervene in the foreign-exchange markets. Its foreign-exchange operations would be mainly for the purpose of pegging intra-European exchange rates. Specifically, at the beginning of its operations, ERSA would issue its own obligations to the national central banks in exchange for national currencies and foreign-exchange reserves. After that, the monetary policy of the national central banks would be limited to domestic operations and discount-rate changes.

In its intra-European operations, ERSA would be subject to no restrictions other than its own balance-sheet constraints. By contrast, its dollar operations would be strictly limited by position ceilings determined by the BCBG. To the extent that its transactions were aimed at maintaining fixed exchange rates among European currencies, its dollar portfolio would be unaffected by any operation involving a bilateral European rate.

ERSA would serve two fundamental roles:

1. It would be a buffer stock of currencies. ERSA would rebalance its portfolio in response to fluctuations in the demand for European currencies in the foreign-exchange markets. These fluctuations might be

due either to a lack of synchronization between private demands and supplies of moneys (changes in velocity that cannot be perfectly forecast by national authorities) or to the less-than-smooth working of the foreign-exchange markets. The ability of ERSA to respond quickly to market fluctuations would relieve the national central banks of the need for an immediate response, thus strengthening the system.

2. It would be a thermometer. The evolution of ERSA's portfolio would reflect trends in imbalances between supplies of national currencies and the demands for them. If there were no such imbalances on average, the composition of ERSA's portfolio would tend to be stable.

Pronounced and persistent imbalances in the portfolio would, therefore, constitute a warning that national monetary policies were not consistent with the maintenance of fixed exchange rates. These portfolio imbalances would be brought to the attention of the BCBG, which would propose and facilitate the choice of strategies to eliminate inconsistencies among national monetary policies.

Operations in the intra-European foreign-exchange market would necessarily leave the value of ERSA's portfolio unchanged; in the absence of changes in intra-European exchange rates, the value of its purchases would always equal the value of its sales. If its operations could not change its total holdings of European currencies, however, then ERSA could not affect the total value of European currencies held by the public; it could only affect the composition.

The size of possible profits and losses from intra-European currency management would be limited by the bilateral bands limiting currency fluctuations relative to the bid-ask spreads. By contrast, the size of profits and losses on dollar operations would be determined by the size of the dollar positions ERSA was allowed to take and the horizon over which it was given independence. These parameters could be fine-tuned by the member countries. In general, the more stable the intra-European exchange rates, the more profitable would be ERSA.

The last problem to be addressed pertains to the optimal size of ERSA—the total value of its currency portfolio. Because the objective of ERSA would be to carry out operations in the foreign-exchange market independently and efficiently, thus lending credibility to the exchange-rate targets, it would be necessary to ensure that it had sufficient resources without borrowing any of the currencies of the member countries. It should never run out of any currency in its portfolio. To measure sufficiency, it would be necessary to estimate the likely fluctuations in money demand relative to supply, a procedure

complicated by two sets of problems. First, expectations about the credibility of the fixed exchange rates would be a crucial determinant of the demand for individual moneys; the more credible the parities, the less likely the occurrence of large relative switches in money demand. Second, fluctuations in money demand would depend on the degree of substitutability among European currencies, as well as the effects of financial innovations that are currently underway and will accelerate in the next few years. It is nevertheless possible to compute a range of estimates for the optimum size of ERSA under a wide array of assumptions about the behavior of money demands and of national money supplies. Preliminary experiments suggest that a portfolio comprising about 10 percent of the total money supply of each member country would enable ERSA to operate without borrowing resources, even in the presence of large short-run fluctuations in relative money supplies. This would undoubtedly lend credibility to the system, provided of course that member countries were to achieve long-run consistency in their national monetary policies.

Because estimates of the evolution of money demands are subject to error, it would be desirable to supplement the actual resources of ERSA with a provision allowing it to draw on participating central banks in case of sudden and unavoidable need. This provision would be invoked only as a last resort, but its existence would reflect the strength of the commitment to the fixed-rates system; it would not entail any transfer of national currencies or foreign-exchange reserves.

More on the Board of Central Bank Governors

Under the proposed plan, the BCBG would have three tasks: (1) It would review the operations of ERSA, the composition of its portfolio, and its operations vis-à-vis third currencies. (2) It would determine whether the current and recent policy stances of member countries were consistent with the fixed parities, and if not, to single out the divergent policies (easily accomplished by an analysis of ERSA's portfolio). (3) It would prepare for each member country alternative monetary-policy targets consistent with fixed exchange rates and would facilitate and encourage the choice among these targets by the member central banks.

It should be emphasized that the BCBG would not determine national monetary policies or make collective decisions; it would be limited to identifying viable alternatives and facilitating international monetary cooperation. For this reason, it should be granted maximum

independence from outside bodies like national governments. Its independence, as well as the political weight it would carry as the collective voice of the national central bank governors overseeing ERSA and the management of fixed exchange rates, should help the individual central banks to implement national monetary targets consistent with exchange-rate stability, even though those targets might conflict with the desires or objectives of domestic constituencies. By their very nature, then, the operations of the BCBG would be more conducive to sound anti-inflationary policies than are the current informal bargaining processes among EMS members, in which there is always the possibility of devaluation and thus the validation of inflation-rate differentials.

5 The Currency Reform

The ultimate objective of European monetary integration is the currency reform, which would occur after successful refinement of the rules governing ERSA and the BCBG or by the exercise of the option to accelerate if the transition proved to be too vulnerable to financial instability.

A currency reform is preferable to fixed exchange rates for two reasons. (1) The odd exchange rates linking European currencies significantly complicate transactions and in themselves make national moneys different from each other and monetary integration incomplete. (2) A one-to-one exchange rate would be a clear message that the monetary union is permanent. To convince the public that there is no remaining difference among national currencies, the symbol of the European Currency Unit (ECU) should be added to the currency notes of each member nation (for example, the new deutsche mark note would carry both the DM and ECU logos). Introducing the ECU as the European currency in this manner would forestall the monetary instabilities associated with its introduction as a parallel currency.

The currency reform would involve a simple redefinition of units, and, without an attendant realignment of exchange rates, would not affect the real values of existing assets and liabilities. To see how the currency reform could be carried out in practice, consider the ECU rates prevailing on January 31, 1990 for the eleven European currencies (see table 1).

The reform would involve a joint declaration by the twelve governments that a new Belgian franc would be worth 42.67 old francs, a new deutsche mark worth 2.04 old marks, and so forth (alternatively, the

TABLE 1
 EXCHANGE RATES RELATIVE TO THE ECU
 ON JANUARY 31, 1990
(rounded to the hundredth point)

Currency	Rate
Belgian/Luxembourg franc	42.67
Danish krone	7.89
German mark	2.04
Dutch florin	2.30
French franc	6.93
Greek drachma	190.90
Irish pound	0.77
Italian lira	1515.00
Portuguese escudo	179.10
Spanish peseta	131.80
U.K. pound	0.72

ECU central rates could be used). Each new national currency would be equal to one ECU, and new banknotes would be printed by the national central banks.

Immediately after the declaration, contracts could be cleared in either ECUs or the old currencies. The value of the stock of new banknotes would be equal to the value of the stock of old banknotes being retired. This arrangement would eliminate all losses or gains that holders of old banknotes and coins might experience as a result of the redefinition of units.

Undoubtedly, this reform would produce a dramatic one-time increase in the use of pocket calculators and a considerable but short-lived nuisance, for it would require the recalculation of all prices and all outstanding assets and liabilities. Those costs, however, should be compared with the present discounted value of all gains to be obtained from moving to a permanent regime whereby all European currencies would have the same values and all transactions across Europe would be enormously facilitated—in particular, the management and control of Europe-wide businesses.

Immediately after the currency reform, the ESCB would be permanently empowered to determine the common European monetary policy. ERSA would be relieved of its initial tasks with the disappear-

ance of the national currencies and would transform itself into the operating agency of the monetary system, carrying out both foreign-exchange and domestic open-market operations.

6 Relating This Proposal to the Delors Report

The plan offered in this essay provides the details left out of the Delors Report: an exact description of the structure and operations of the ESCB during stage two and a description of the currency reform that would achieve full monetary union. The plan also suggests two slight, but crucial, modifications of the original framework proposed by the Delors Report: (1) the announcement that existing bilateral parities are not to be changed during the transition to monetary union, and (2) the commitment to accelerate progress toward union whenever speculative pressures in the money markets would make it difficult to preserve existing parities.

The approach taken in developing this plan was to design institutions that could cope effectively with the most important economic problems of the transition, the instability of financial and foreign-exchange markets, the likelihood of wide fluctuations in demands for national currencies, and the adjustment of expectations of price setters regarding inflation and exchange-rate changes.

The necessity of strengthening EMS institutions after the liberalization of capital flows was recognized by the Delors Committee's French delegation, which proposed that a European Reserve Fund (ERF), similar in many ways to ERSA, be created during stage one (see, in particular, de Larosière, 1989). The Report explicitly advocates the pooling of foreign-exchange reserves during stage two (par. 57).

A detailed comparison of ERSA and the proposed ERF can be made by comparing part two of Section 4 above with de Larosière's paper. It is important to stress that, unlike the ERF, ERSA would have competence only in the foreign-exchange sphere. It would not foreshadow the final European central bank, but would become one of its departments; it would not exercise surveillance over monetary trends (the task of the BCBS); and it would not supplement the actions of individual central banks, but would, instead, carry out foreign-exchange operations for all the participating central banks.

7 Concluding Remarks

The EMS has helped to fight inflation in Europe and has improved cooperation among central banks, but it is not the right institution to effect the transition to monetary union. What is needed is a structure that will encourage more cooperation among central banks and impart greater credibility to the commitment to fixed exchange rates.

Because acceptance of the first stage of the Delors plan amounts to acceptance of the ultimate aim of monetary union (par. 39), this essay assumes that a single currency is the ultimate objective for Europe. It is essential that the transition toward one currency be sustained by institutions that are credible to the markets, allow some flexibility, and ensure that sound policies will be carried out. The institutions proposed here were designed to meet these three objectives.

8 Postscript: The Evolving Debate on Monetary Union in Europe

While the first draft of this essay was being completed, a large number of papers appeared on the transition to monetary union. The blossoming of work on the subject is justified by two deadlines: (1) the December 1990 date set for the intergovernmental conference that will modify the Treaty of Rome to set up the institutions that will manage the transition and the monetary union, and (2) the resolution adopted by the European Council in May 1990 to have the work of the conference completed and the new Treaty articles ratified by national governments before January 1993. No doubt more papers will appear in the months to come.

Rather than adapt my essay to the evolution of the debate and take account of these more recent papers, it seemed more appropriate to leave it untouched, to highlight the ways in which the debate is evolving, and to show how my proposal fits into the discussion. That is the purpose of this postscript.

My essay makes two main points: (1) The plan for gradual monetary union is not likely to deliver the convergence of expectations implicitly envisioned by its drafters; monetary convergence will not occur without a substantial effort to increase the credibility of the plan (that is why an accelerated move toward monetary union might be more successful). (2) A single currency is the necessary endpoint of union, and a single currency is best achieved by a monetary reform.

A number of authors have pointed out weaknesses in the gradual plan proposed by the Delors Committee. The best examples are Dornbusch (1990), Cukierman (1990), and Bofinger (1990). Dornbusch points to the problem of lingering inflation differentials (his paper helped inspire the discussion in this essay); in contrast to my proposal, however, he advocates the immediate locking of parities among a core group of EMS countries, most prominently France and Germany, and the complete elimination of the bands for fluctuations. In the absence of changes in the rules for the conduct of national monetary policies, this reform could become simply a monetary union with Germany. Cukierman provides a critique of stage two, based on the observation that the system is too vulnerable to exchange-rate realignments. Bofinger argues that stage two should be eliminated, because it would be dangerous to have the ESCB operating together with national monetary authorities.

This essay has not discussed the interaction between fiscal and monetary policies. The omission is justified by my belief that fiscal-policy imbalances are a lesser threat to monetary convergence than are nonconverging expectations, which are reflected in diverging wage-price dynamics and differences in *ex post* real interest rates. Yet, the wide spectrum of budget deficits, and of debt-to-GDP ratios as well, preoccupies many. Even the Delors Report (par. 33) calls for controls on national budget deficits, and the point is also taken up in the recent document of the Monetary Committee of the European Community (1990). The controversy over the need for budgetary restraint in a European Monetary Union is reviewed incisively by Buiter and Kletzer (1990), who also offer the most compelling arguments against formal budgetary rules.

There have been few specific proposals for the functioning of the ESCB during the early stages of the transition, except, perhaps, that of Meade (1990), who advocates the creation of a supernational central bank to coordinate national monetary policies. Thygesen (1989) explores a different role for the ESCB with reference to policy instruments and to intermediate and final targets. The European Commission (1990) has circulated a document detailing a structure for the ESCB, which it calls the "EuroFed," and advocating some margin for differentiation in the implementation of the common monetary-policy directives, a position justified by the different structures and practices in national money markets.

The Delors Report calls for a single currency but does not give a high priority to its establishment. Many observers have noted this and have

argued that a single currency is the crucial building block of a European Monetary Union. Advocates of the single currency include the European Commission (1990), which cites a comprehensive study by Ernst & Young (1990), as well as Thygesen and Gros (1989).

Of special interest is the debate on how to reach a single currency. The U.K. Treasury (HM Treasury, 1989) suggested that the best way is to let the markets choose it if they want to. The Treasury proposal is extremely close to Hayek's competing-currencies manifesto (Hayek, 1976), which claimed that the removal of all obstacles to the free diversification of currency portfolios, including legal tender rules, would allow Europe to choose the currency with the best store-of-value and transactions services. Hayek assumed that exchange rates among the competing currencies would continue to float, but the British proposal does not advocate this. A more recent Treasury paper (HM Treasury, 1990) pursues the same line, suggesting the establishment of a bank that would be in charge of issuing ECUs to circulate as a parallel currency. The competing-currencies proposal and the introduction of a parallel currency have been criticized by many (see, for example, Carli, 1989). Yet, a number of economists continue to favor either the competing-currencies approach (see Vaubel, who also gives a useful survey of alternative strategies for the EMU) or the general stance of the U.K. government (see Eltis, 1990).

As the December deadlines draw near, more papers on stages two and three will most surely be forthcoming.

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